Section – B

(Short Answers)

Note: Answer any Eight of the following questions. Each question carries 05 marks.

Q.2 Enlist the name of branches of Chemistry and define any two of them.

Q.3 C–14 and N–14 both have same mass number yet they are different elements. Explain.

Q.4 What are lanthanides and actinides?

Q.5 What are the valence electrons of an atom? How many valence does a nitrogen atom passes?

Q.6 What is Brownian movement? Describe with example.

Q.7 What is the difference between a primary and secondary cell?

Q.8 What is potable water? Write four main characteristics of potable water.

Q.9 How ethane is prepared from ethyl alcohol?

Q.10 Calculate the pH and pOH of a solution whose (H^+) ion concentration is 3.0×10^{-2} moles / litre.

Q.11 Define any five chemical differences between Metals and Non-metals.

Q.12 Nitric acid is an important chemical compound. Give any five uses of nitric acid.

Q.13 Balance the following chemical equations.

(i) $Ca + H_2O \longrightarrow Ca(OH)_2 + H_2$

(ii) $CH_4 + O_2 \longrightarrow CO_2 + H_2O$

(iii) $NaHCO_3 \longrightarrow Na_2CO_3 + H_2O + CO_2$

(iv) $CO + O_2 \longrightarrow CO_2$

(v) $Fe + H_2O \longrightarrow Fe_3O_4 + H_2$

Section – C

(Descriptive Answers)

Note: Answer any TWO of the following question. Each question carries 14 (7 + 7) marks.

Q.14 (a) What is chemical reaction? How many types of chemical reaction? Explain any two reactions with examples.

(b) What common properties are shown by ionic compound?

Q.15 (a) State and explain Faraday's First Law of Electrolysis.

(b) State Exothermic and Endothermic reaction. Give any two examples.

Q.16 (a) Differentiate between any one of the following.

Diamond and Graphite   Wrought iron and Steel

(b) How methane is prepared? Give its properties.